IN THE SPECIFICATION

Please replace paragraph **[0030]** with the following rewritten paragraph:

[0030] The substrate 302 is typically an insulating or non-conducting substrate that is used to form a laterally conducting device. To compensate for the lattice mismatch and the thermal expansion coefficient mismatch between the semiconductor layers and the substrates, a buffer layer ~~104~~ 304 may be provided atop the substrate 302. When the semiconductor material that is to be subsequently grown is a nitride-based semiconductor, such as gallium nitride (GaN) or a gallium nitride-based material, for example, the substrate may be a crystalline sapphire wafer, silicon carbide wafer or undoped silicon wafer and the buffer layer may be comprised of one or more layers of nitride-based materials to provide a transition between the lattice structure of the substrate and the lattice structure of the gallium nitride or other nitride-based semiconductor layer.

Please replace paragraph **[0032]** with the following rewritten paragraph:

[0032] A highly doped semiconductor layer 306~~106~~, which may be a nitride-based semiconductor such as gallium nitride or gallium nitride-based semiconductor, is then formed atop the buffer layer 304 or, when the buffer layer is not present, directly atop the substrate 302. The highly doped layer 306 is typically formed using an epitaxial growth process. A reactive sputtering process may be used where, when the layer 306 ~~106~~ is a nitride-based semiconductor, the metallic constituents of the semiconductor, such as gallium, aluminum and/or indium, are dislodged from a metallic target disposed in close proximity to the substrate while both the target and the substrate are in a

gaseous atmosphere that includes nitrogen and one or more dopants. Alternatively, metal organic chemical vapor deposition (MOCVD) is employed wherein, when the layer 306 ~~106~~ is a nitride-based semiconductor, the substrate is exposed to an atmosphere containing organic compounds of the metals as well as to a reactive nitrogen-containing gas, such as ammonia, and a dopant-containing gas while the substrate is maintained at an elevated temperature, typically around 700-1100ºC. The gaseous compounds decompose and form a doped semiconductor in the form of a film of crystalline material on the surface of the substrate 302. The substrate and the grown film are then cooled. As a further alternative, other epitaxial growth methods, such as molecular beam epitaxy (MBE) or atomic layer epitaxy may be used. When the resulting highly doped layer 306 ~~106~~ is a nitride-based semiconductor, the layer preferably n-type with a doping concentration of at least 4E18 cm^{-3}.

Please replace paragraph **[0035]** with the following rewritten paragraph:

[0035] A Schottky metal contact 310 is formed atop the mesas of the lower doped layer 308 ~~108~~ in a known manner and forms the metal-to-semiconductor junction with the lower doped layer. When the lower doped layer 308 is an n-type GaN based semiconductor, the Schottky metal layer is typically comprised of a platinum (Pt) layer and a gold (Au) layer (Pt/Au), a palladium (Pd) layer and a gold layer (Pd/Au), or a nickel (Ni) layer and a gold layer (Ni/Au), though other high work function materials may be used to obtain the desired barrier height.

Please replace paragraph **[0038]** with the following rewritten paragraph:

The Schottky metal layer 310~~110~~, the ohmic metal layer 306 ~~106~~ and the bond pad metal layers 312~~112~~, 318~~118~~ may be formed using methods known in the art.